

BACKGROUND

Peer Review Process for the methodology and measures used in the November 2002 Census Bureau report on housing patterns

The Census Bureau established an independent peer review panel of five members, selected by the President of the Population Association of America. An honorarium was paid to each member of the panel. A meeting of the five experts was held at the Census Bureau on September 24, 2004 for them to exchange views. They were then given the opportunity to revise their peer reviews. A summary of the panel's meeting was prepared by the Census Bureau.

The charge to the peer reviewers was as follows:

The Census Bureau recently issued an report on racial and ethnic housing patterns in metropolitan areas using short-form data from the past three decennial censuses (Iceland and Weinberg, 2002). The Census Bureau has also provided 19 measures of housing patterns (1980, 1990, and 2000) for metropolitan areas, micropolitan areas, and places on its web site <<http://www.census.gov/hhes/www/resseg.html>>. The choice of measures for the report and the web site was based on a 1988 study (Massey and Denton, 1988) and may therefore be dated. The primary goals of the peer review are to identify if (1) the five measures of housing patterns selected by the authors are appropriate to represent the five dimensions identified by Massey and Denton, (2) any of the 19 measures on the web site do not meet minimum technical requirements for publication and therefore should not have been published, (3) any measures published in peer-reviewed journals since 1988 meet minimum technical requirements and so should have been included in the Census Bureau calculations, and (4) any improvements are needed if similar calculations are made using data from the 2010 Census.

References

Douglas S. Massey and Nancy A. Denton. "The Dimensions of Residential Segregation." *Social Forces* v. 67 no. 2 (December 1988) pp. 281-315.

John Iceland and Daniel H. Weinberg, with Erika Steinmetz. *Racial and Ethnic Residential Segregation in the United States: 1980-2000*. Census 2000 Special Report CENSR-3, August 2002.

SUMMARY OF DISCUSSION AT SEPTEMBER 24, 2004 PEER REVIEW MEETING

*Note: This summary is the convener's sense of the general meeting discussion. The panel members were given the opportunity to comment on this summary and the final version reflects most of their comments. A diversity of viewpoints was offered and not all panel members agree with all of the points below, so the reader is urged to read the individual reviews.*¹

GENERAL COMMENTS

1. *Racial and Ethnic Residential Segregation in the United States: 1980-2000* is a careful analytic report of great use to researchers.

2. The Census Bureau needs to keep publishing all 19 measures included in that report.
3. One panelist (Quinn) felt that the report used a questionable approach and urged that future ranking studies be conducted by academic researchers and others outside the federal government.

METHODOLOGICAL COMMENTS

4. There is a clear distinction between spatial and non-spatial measures, so there is a need to continue to present multiple dimensions of segregation. Most felt that the choice of which measure to focus on within a dimension is not that important, although each offers a different lens through which to view race, space, and housing patterns. *Dissimilarity* is the oldest and most widely used, though not necessarily the best for the evenness dimension, given its characteristics. There was some discomfort expressed as well with the *delta* index. An alternative index for urban sprawl could be investigated.
5. Some took issue with the report's decision to use as the population under study the group choosing a particular race *regardless of whether they chose another race* rather than the *single-race* population and suggested that both calculations be supplied, especially for comparisons to pre-2000 data (when respondents were asked to choose only one race). Perhaps the social science literature will offer more guidance by the time these indexes can be computed using the 2010 Census data.
6. One should retain *tracts* as the unit of analysis (not *blocks*) as tracts are used in much of the social science research (in part because long form decennial census data are not available at the block level). There was some disagreement about this recommendation, as the population is often not distributed evenly within tracts (especially in relatively rural tracts).
7. Indexes should be based on counts of *people* (not *householders*) and should be calculated for *metropolitan areas* (not *urbanized areas*) for historical continuity. The calculations should exclude people in institutional Group Quarters (prisons, military barracks, ships) as they did not have the freedom to choose their residential location and interact only peripherally with the neighboring population.
8. If the Census Bureau uses maps to illustrate the indexes, some suggested using block data. However, it was also suggested that since researchers outside of the Census Bureau had the resources and the data to produce these maps from Summary File 1, the Census Bureau should use its resources in other ways.
9. One needs a better fixed point for the centralization indexes since the metropolitan area's population centroid may have no particular relationship to the historical central business district (the location originally used for the indexes); in addition, the way the index was computed allows the centroid to move each decade, which some argued was inappropriate. Alternative possibilities include: the City Hall of the core city; the population centroid of the core city in one of the years, say 1980; or the weighted average location of employment for key nodes, again for a specific year.

10. Ask mathematical statisticians to provide guidance on appropriate population cutoffs – many places are too small to have meaningful indexes.

SUGGESTIONS FOR FUTURE PUBLICATIONS

11. It would be valuable for some academic researcher to replicate the Massey-Denton study, which used factor analysis to identify five dimensions of segregation, in order to determine whether the factor loadings using 2000 data are similar to those that they computed based on 1980 data.
12. The report's caveats on the use of ranks may not be strong enough since publication by the Census Bureau makes them seem "official." In the future, consider presenting data only in alphabetical order and letting those outside the Census Bureau calculate ranks for their own purposes. Clearer guidance on the use of ranks might be appropriate for the Census Bureau to present on its website.
13. The Census Bureau should calculate and present relevant indexes for non-Hispanic single-race Whites, including presenting results for them in a separate chapter.
14. The Census Bureau should consider calculating several measures that account for the distribution of more than two groups (e.g., entropy).
15. Additional isolation and exposure indexes should be calculated – each group compared to the *total* of all other groups, not just to non-Hispanic Whites. Also consider providing all pairwise comparisons (e.g., Blacks to Asians) for as many indexes as possible.
16. Add measures of *integration* (e.g., diversity) calculated at the neighborhood level and summed (using a weighted average) at the metropolitan level. (See Galster's suggestions in his review.) Also provide more distributional information such as was presented in some of the appendixes to the report.
17. Consider new possibilities for descriptive indexes using GPS-verified addresses that will likely be available from the 2010 Census.
18. If resources can be found, it would be worthwhile to extend the series back to 1960 and 1970.

Endnote:

1. The convener was Daniel Weinberg, one of the co-authors of the report. John Iceland, another co-author, also attended the meeting and reviewed the summary.